

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

0301735
CC Recd: 04/22/2003

03-WMD-0174

APR 16 2003

RECEIVED
MAY 16 2003

EDMC

Ms. Jane A. Hedges
Cleanup Section Manager
Nuclear Waste Program
State of Washington
Department of Ecology
1315 W. Fourth Avenue
Kennewick, Washington 99336

Dear Ms. Hedges:

CONTAINED-IN DETERMINATION REQUEST FOR THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) DRILLING WASTE GENERATED DURING INSTALLATION OF TWO GROUNDWATER MONITORING WELLS NEAR THE 241-TX TANK FARM.

This letter requests a contained-in determination from the State of Washington Department of Ecology (Ecology) for the saturated soil and debris generated from installation of RCRA wells C3956 and C3957. The two wells are located near the 241-TX tank farm and were installed to satisfy Hanford Federal Facility Agreement and Consent Order Milestone M-24-00. Waste from the drilling activities is being stored at the well site awaiting a contained-in determination approval from Ecology.

The U.S. Department of Energy, Richland Operations Office (RL) previously submitted two contained-in determination requests for previously drilling activities (RL letter to Jane Hedges from Joel Hebdon, "Contained-In Determination Request for Resource Conservation and Recovery Action of 1976 [RCRA] Drilling Waste Generated During Installation of Six Groundwater Monitoring Wells Around the 241-B/BX/BY Tank Farms and 241-U Tank Farm," dated January 10, 2002 [02-RCA-0120], and RL letter to Jane Hedges from John Morse, "Contained-In Determination Request for the Resource Conservation and Recovery Act (RCRA) Drilling Waste Generated During Installation of Five Groundwater Monitoring Wells Near the 241-T, 241-TX/TY, and 241-S/SX Tank Farms," dated February 26, 2002 [02-GWVZ-0012]). The contained-in determination request is attached and includes data from both groundwater wells.

Ms. Jane A. Hedges
03-WMD-0174

-2-

APR 16 2003

If you have any questions, please contact Ellen Mattlin, Regulatory Compliance and Analysis Division, on (509) 376-2385.

Sincerely,

A handwritten signature in black ink that reads "Joel Hebdon". The signature is written in a cursive, flowing style.

Joel B. Hebdon, Director
Regulatory Compliance and Analysis Division

WMD:MJF

Attachment

cc w attach:

B. Khaleel-Becker, Ecology

J. Yokel, Ecology

J. A. Winterhalder, DFSH

ATTACHMENT

CONTAINED-IN DETERMINATION REQUEST FOR THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) DRILLING WASTE GENERATED DURING INSTALLATION OF TWO GROUNDWATER MONITORING WELLS NEAR TX/TY TANK FARMS.

1.0 Introduction

The following information supports a contained-in determination request for saturated zone drill cuttings and related miscellaneous solid waste generated during drilling of RCRA monitoring wells 299-W15-44 (C3956) and 299-W15-19 (C3957) near the 241-TX/TY tank farms at Hanford Site (Figure 1). Tank farm wastes, known to contain listed waste constituents, have migrated into the groundwater underlying the tank farms. The saturated zone media and debris generated during drilling of groundwater monitoring wells C3956 and C3957 have come into contact with the contaminated groundwater.

Groundwater-contacted media and debris may be determined to no longer contain the listed dangerous waste code(s) if the contaminants in the media/debris fall below specific risk-based concentrations. The Washington State Department of Ecology (Ecology) has established these risk-based action levels as the residential standards calculated under the Model Toxics Control Act (MTCA), found in Washington Administrative Code (WAC) 173-340-720, as amended February 12, 2001. Ecology approved a Sampling and Analysis Plan to support a Contained-In Determination for this material (Ecology 2002). Approval of this contained-in determination will eliminate the requirement to manage this media and debris as a listed hazardous waste and significantly reduce the costs associated with waste disposal.

2.0 Background

Two groundwater monitoring wells were installed around 241-TX/TY tank farms in support of the Hanford Facility Agreement and Consent Order (Tri-Party Agreement) Milestone M-24-00N.

Form 3 of the Hanford Site Part A RCRA Permit for the tank farms area identifies the following listed waste solvents:

- F001 – 1,1,1-trichloroethane
- F002 – methylene chloride
- F003 – acetone, methyl isobutyl ketone
- F004 – o-cresol, p-cresol, cresylic acid
- F005 – methyl ethyl ketone.

Saturated zone soils are generated at each well installation and stored in 55 gallon drums. Additionally, approximately one drum of solid waste that may have come into contact with contaminated media is generated at the well site (per well installation). A small amount of saturated zone soil sampling waste is also generated along with debris associated with decontamination of the drilling equipment.

3.0 Contained-In Strategy

RL requests that a contained-in determination be granted if the concentration of listed organic constituents in the soils are less than the levels presented in Table 1 under the heading "Soil Conc'n Protection of Groundwater (mg/kg)". In the event that constituent levels exceed these levels, contingent management levels are presented in Table 1 under heading "Method B Unrestricted Land Use (mg/kg)".

Saturated zone cuttings from each well were taken and were sampled to verify the absence of organic solvents. The samples were obtained from the drum containing the drill cuttings from the first five feet below the water table in the saturated zone. These data from the drill cuttings will be used to designate the other wastes associated with this contained-in determination. If the soil is determined to no longer contain listed organic solvents, then the associated miscellaneous solid waste also will not contain listed organic constituents. The saturated zone soil should represent the worst-case scenario for the presence of contamination.

4.0 Sampling Results

Saturated zone soil data from C3956 and C3957 are presented in Table 1. The data indicate that no listed waste constituents (see Table 1) have been found above the soil concentration protective of groundwater (the most restrictive level, WAC 173-340-740[3]).

5.0 Request for Contained-In Determination

Based on data presented in Table 1, RL requests that Ecology grant a contained-in determination for the saturated zone drill cuttings and associated miscellaneous solid waste generated from drilling of C3956 and C3957 for the waste codes F001 through F005 as listed in the RCRA permit for the tank farms and discussed in DOE-RL 03-RCA-0066.

6.0 References

Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901, et. Seq.

WAC 173-340, "Model Toxics Control Act – Cleanup," Washington Administrative Code, as amended.

Ecology, 2002, letter, "*Ecology Approval of Sampling and Analysis Plan to Support a Contain-In Determination for Calendar Year 2002 Resource Conservation and Recovery Act Wells C3956 and C3957*", 0205988, dated December 16, 2002, Department of Ecology, Kennewick, Washington.

DOE-RL, 2002, letter, "*Contained-in Determination Request for the Resource Conservation and Recovery Act (RCRA) Drilling Waste Generated During Installation of 11 Groundwater Monitoring Wells Near the 241-T, 241-TX/TY, 241-S/SX, 241-B/BX/BY, and 241-U Tank*

Farms," 02-GWVZ-0022 Reissue, dated May 16, 2002, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Figure 1. TX-TY Waste Management Area Well Locations.

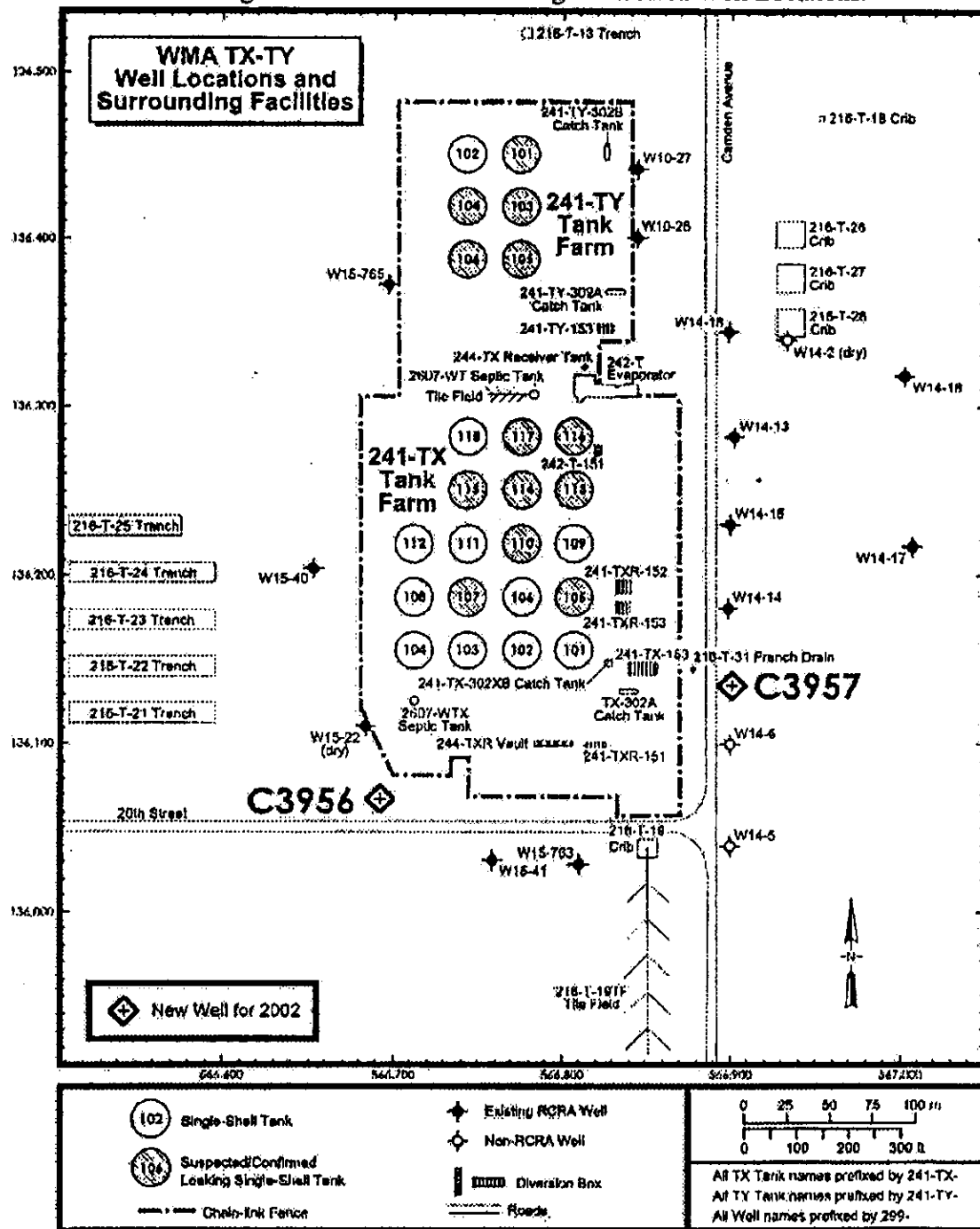


Table 1. Contained-In Determination Levels for Soils.

Contaminant (Lab Name)	Soil Conc'n Protective of Groundwater ¹ (mg/kg)	Method B Unrestricted Land Use (mg/kg)	Well C3956		Well C3957	
			Sample B15PC8		Sample B15VT5	
			Value Reported (mg/kg)	Data Qualifier	Value Reported (mg/kg)	Data Qualifier
1,1,1-trichloroethane	1.58	72,000	0.005	U	0.005	U
Carbon tetrachloride	0.0031	7.69 ³	0.003	U	0.003	U
Methylene chloride	0.0254	133 ³	0.009	B	0.016	
Acetone	3.21	8,000	0.011		0.010	U
Methyl isobutyl ketone (2-Hexanone)	12.8	6,400	0.010	U	0.010	U
m-cresol (3- and/or 4-Methylphenol)	4.66	4,000	0.400 ⁴	U	0.350 ⁴	U
p-cresol (3- and/or 4-Methylphenol)	0.466	400	0.400 ⁴	U	0.350 ⁴	U
o-cresol (2-Methylphenol)	4.66	4,000	0.400	U	0.350	U
Methyl ethyl ketone (2-Butanone)	21.8	48,000	0.010	U	0.010	U

Notes

1 = WAC 173-340-740(3)(b)(iii)(A)

2 = WAC 173-340-740 (3)(b)(iii)(B)

3 = MTCA Method B Carcinogen

4 = Value listed as reported

Lab qualifiers:

B = Indicates that the analyte was found in the associated lab blank and in the sample

U = non detect